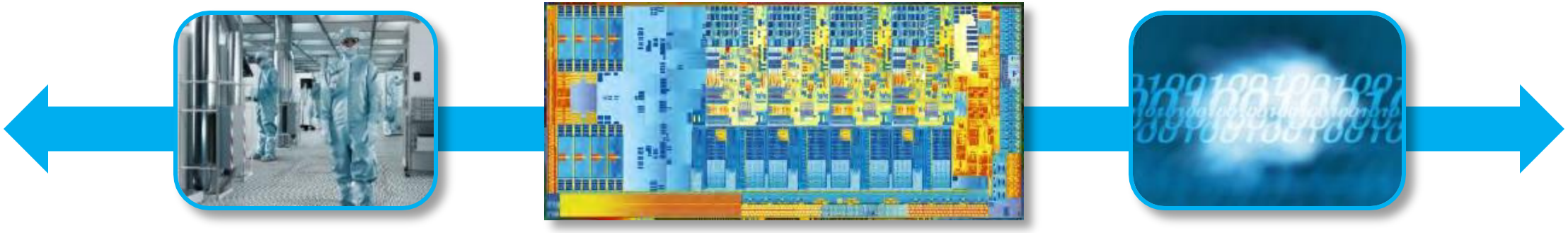
PROTECTING GLOBAL DIGITAL INFRASTRUCTURE: IOT SECURITY CHALLENGES TOWARDS 2020

Intel Global Public Policy

Worapat Patram

INTEL'S MISSION

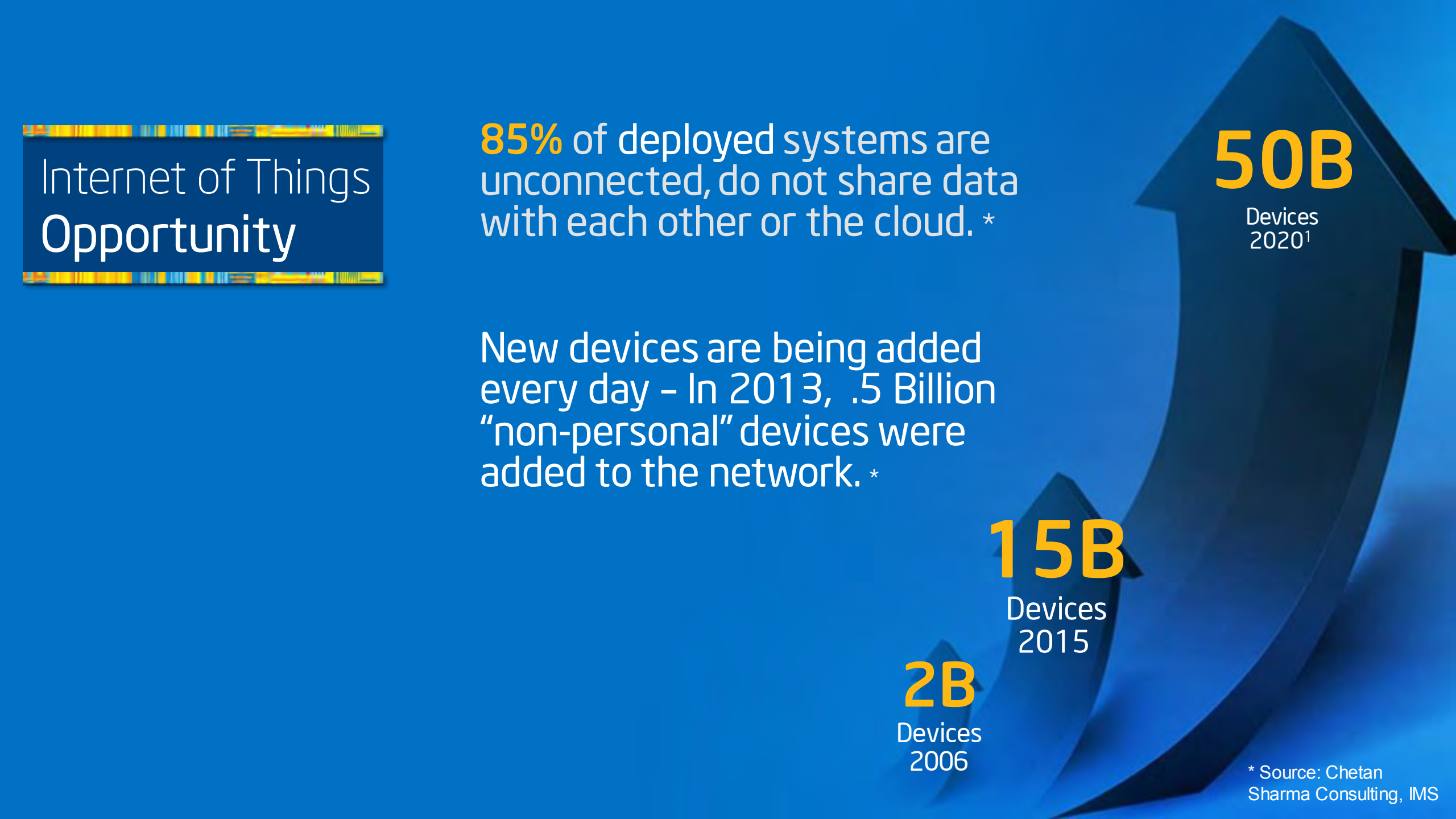
Utilize the power of Moore's Law to bring smart, connected devices to every person on Earth



Internet of Things Opportunity

85% of deployed systems are unconnected, do not share data with each other or the cloud. *

New devices are being added every day – In 2013, .5 Billion "non-personal" devices were added to the network. *



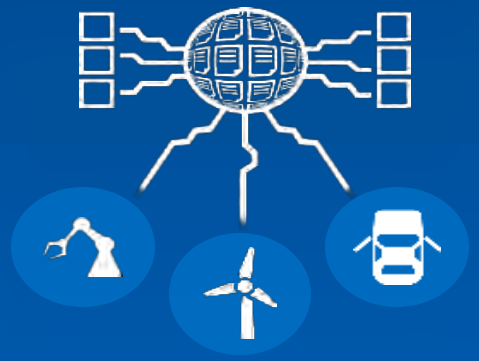
* Source: Chetan Sharma Consulting, IMS

THE INTERNET OF THINGS

INTELLIGENT DEVICES

Deliver Intelligence where needed to acquire and filter data securely

INTELLIGENT SYSTEM OF SYSTEMS



Billions of intelligent devices sharing data and securely, supporting legacy and new environments

END TO END ANALYTICS

Solutions from device to cloud to deliver end-to-end customer value

Intel: Leading in IoT Standards and Consortia

IIC Founder Companies

industrial internet CONSORTIUM

185+

Reference Architecture + Frameworks and Testbeds = Interoperability

OPEN INTERCONNECT CONSORTIUM

80+

OIC Board of Directors

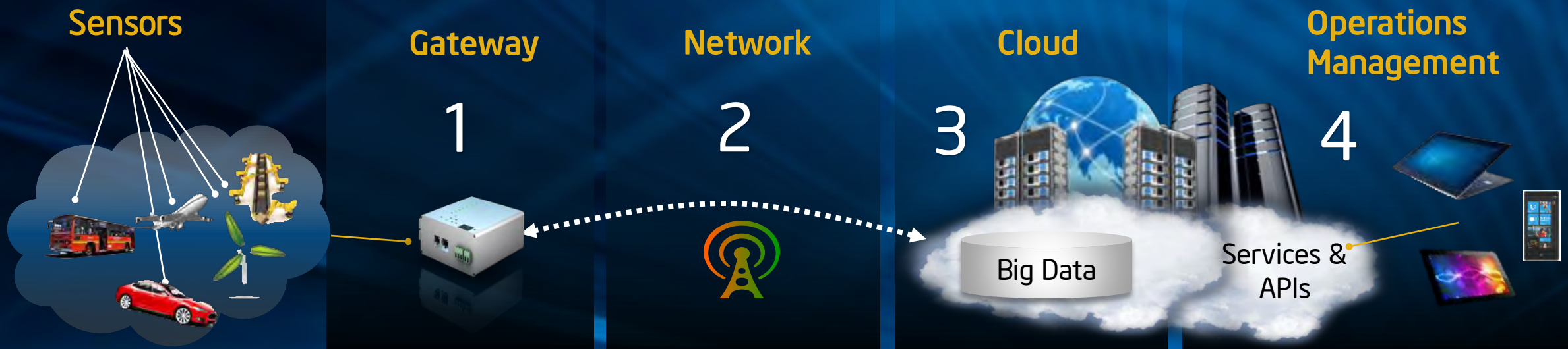
Industry Standards + Open Source Solutions = Interoperability

China IoT National Standards Group

NIST · ISO JTC 1 IEC INFORMATION TECHNOLOGY STANDARDS · ETSI World Class Standards · IEEE · 3GPP

IOT END-TO-END WORLDWIDE STANDARDS

Intel IoT Solutions – End-to-End



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intel Quark
intel Atom inside
WIND RIVER
Intelligent Device Platform (IDP)
McAfee

intel Xeon inside
> Intel Open Network Platform (ONP)
> Network Function Virtualization (NFV)

intel Xeon inside
cloudera
Ask Bigger Questions

AEPONA
An Intel Company
MASHERY
An Intel Company
API Monetization Platform (AMP)

intel CORE
intel CORE i5
intel Atom inside

INTERNET OF THINGS:
Security Challenges

- Long, complex life cycle
- Devices are often part of the system
- Legacy Infrastructure
- E2E Security
- Different IoT Risk Profile
- Interoperability & Standards

Our efforts on IoT business towards 2020
~Change the world~

- Deliver best products and best practices to the market
- Contribute global policy and standards discussion to keep the value of the Global Digital Infrastructure

Global digital infrastructure

- “Global Digital Infrastructure: GDI” is a infrastructure connect people and machines around the world
- The value of the GDI is “Connected Globaly”
  - Network fragmentation (by physically, logically, technically) will lose the value of the GDI significantly
  - Policy and rules on GDI must be globally interoperable and coordinated (with accepting local rules)
  - IoT will be part of GDI and take important role

Summary

- IoT will change the world
- We need to understand the difference of product life cycle and complexity of the system
- Even if it's small, the impact of the malfunction would be significant
- Security protection must be the first priority item
- Avoiding fragmentation, collaborate and share best practices

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